

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference PRW/P54509W0	FOR FURTHER ACTION see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. PCT/GB 00/ 02993	International filing date (day/month/year) 07/08/2000	(Earliest) Priority Date (day/month/year) 06/08/1999
Applicant PRO-FIT INTERNATIONAL LIMITED		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 2 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing :

☐ contained in the international application in written form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☐ **Certain claims were found unsearchable** (See Box I).

3. ☐ **Unity of invention is lacking** (see Box II).

4. With regard to the **title**,

☐ the text is approved as submitted by the applicant.

☒ the text has been established by this Authority to read as follows:

METHOD OF PRODUCING STRETCHABLE FABRICS

5. With regard to the **abstract**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is Figure No.

☐ as suggested by the applicant.

☐ because the applicant failed to suggest a figure.

☐ because this figure better characterizes the invention.

☒ None of the figures.

INTERNATIONAL SEARCH REPORT

International Application No

PCT/GB 00/02993

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 D06C21/00 D06C27/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 D06C A41H

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, PAJ, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	GB 2 256 785 A (MARKS AND SPENCER PLC) 23 December 1992 (1992-12-23) page 10, line 3 - page 11, line 28 ----	1, 6, 10
A	EP 0 705 356 B (D.E. MORRIS) 14 October 1998 (1998-10-14) cited in the application column 1, line 38 - line 47 column 2, line 3 - line 17 column 5, line 18 - line 48 -----	1, 2, 10

☐ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

* Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- "&" document member of the same patent family

Date of the actual completion of the international search

24 October 2000

Date of mailing of the international search report

09/11/2000

Name and mailing address of the ISA

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Goodall, C

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/GB 00/02993

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
GB 2256785	A	23-12-1992	NONE	
EP 0705356	B	10-04-1996	AU 674415 B	19-12-1996
			AU 6726394 A	20-12-1994
			DE 69413975 D	19-11-1998
			DE 69413975 T	10-06-1999
			EP 0705356 A	10-04-1996
			JP 8510510 T	05-11-1996
			US 5987721 A	23-11-1999
			AT 172258 T	15-10-1998
			CA 2163457 A	08-12-1994
			ES 2125455 T	01-03-1999
			WO 9428227 A	08-12-1994

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau(43) International Publication Date
15 February 2001 (15.02.2001)

PCT

(10) International Publication Number
WO 01/11132 A1

- (51) International Patent Classification: **D06C 21/00**
27/00
- (21) International Application Number: **PCT/GB00/02993**
- (22) International Filing Date: **7 August 2000 (07.08.2000)**
- (25) Filing Language: **English**
- (26) Publication Language: **English**
- (30) Priority Data:
9918488.9 **6 August 1999 (06.08.1999)** **GB**
- (71) Applicant (for all designated States except US): **PRO-FIT INTERNATIONAL LIMITED [GB/GB]; Unit 40, Albion Mills, Albion Road, Bradford BD10 9TF (GB).**
- (72) Inventor; and
- (75) Inventor/Applicant (for US only): **MORRIS, Paul, A., J. [GB/GB]; Pro-Fit International Limited, Unit 40, Albion Mills, Albion Road, Bradford BD10 9TF (GB).**
- (74) Agent: **WHARTON, Peter, Robert; Urquhart-Dykes & Lord, Tower House, Merrion Way, Leeds LS2 8PA (GB).**
- (81) Designated States (national): **AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.**
- (84) Designated States (regional): **ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).**
- Published:
— *With international search report.*
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

(54) Title: **METHOD OF PRODUCING STRETCHABLE FABRICS**

(57) Abstract: A method of treating a woven fabric to produce a stretchable fabric combination which comprises applying heat and pressure to the fabric in such a manner that the yarn strands substantially across the width of the fabric are forced closer together thus imparting generally semi-permanent stretch into the fabric while simultaneously at least partially bonding thereto a synthetic interlining fabric employing a stretchable bonding agent or film. The woven fabric employed in the method of the invention will usually be of a non-synthetic textile material, for example wool or cotton, which can not normally be permanently set by heat alone. By contrast, the interlining material will normally be a synthetic material which is thermoplastic and can be heat set, such as a polyester or polyamide textile material. The bonding coating or film is preferably material which as well as bonding will impart stretch to the final combined product and it is preferred for this purpose to use a polyurethane material. The material may be coated on either the woven non-synthetic fabric or the interlining fabric or may be a film interposed between the two.

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531 Rec'd PCT/PT

25 JAN 2002

METHOD OF PRODUCING STRETCHABLE FABRICS

This invention relates to a process for treating fabric and to the fabric produced, particularly but not exclusively for application in clothing manufacture, which enables a certain degree and type of stretch to be imparted to, for example, a waistband.

Conventionally, waistband interlining can be elasticated and the outer fabric of the waistband "rouched" or "gathered" providing for a degree of stretch but at the expense of compromising the "tailored" look and fit of the garment to which such an elasticated waistband is attached. Alternatively, it comprises a "non-stretch" interlining which acts as a stiffener stabilising the outer fabric, affording some degree of reinforcement and perhaps providing added resilience. The disadvantage of the latter system of construction is that there is little "give" or "ease" in that area of the garment incorporating the waistband, and the fit of the garment may become uncomfortable to the wearer for example after meals when the waist expands. In prolonged wear, the top of the waistband can be forced to "give way" and effectively "roll over", rendering the look of the garment unsightly. In addition, a wearer falling mid-way between sizing of "off the peg" waistbanded garments selects a garment which is either too tight or too loose in wear.

In our European patent publication EP-B-0705356 we disclose a method of treating a woven fabric characterised in the combination of two stages - a first stage which includes applying heat and pressure to the fabric in such a manner that the yarn strands substantially across the width of the fabric are forced closer together thus imparting generally semi-permanent "ease" or "stretch" into the fabric, and a subsequent, second stage which includes affixing to the fabric treated according to the first stage of the method a selected interlining and/or interlining combination having inherent stretch whereby the semi-permanent "ease" or "stretch" imparted to the fabric during the first stage is made substantially permanent during the second stage.

The interlining or interlining combination used in the method of the above European patent publication must itself have sufficient stretch characteristics, and sufficiently powerful

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elasticity, in order to ensure that the woven fabric in the finished combination is brought back to its original length after stretching.

Such interlinings or interlining combinations are available but are relatively expensive to produce and may involve relatively expensive stretch yarns such as "Lycra" yarns.

The present invention seeks to provide a method of producing a combined fabric with similar stretch characteristics to that described in our above-mentioned European patent publication, initially employing less resilient and less expensive interlinings or interlining combinations, and additionally to provide a method capable of producing such fabrics in a single step process.

According to the present invention there is provided a method of treating a woven fabric to produce a stretchable fabric combination which comprises applying heat and pressure to the fabric in such a manner that the yarn strands substantially across the width of the fabric are forced closer together thus imparting generally semi-permanent stretch into the fabric while simultaneously at least partially bonding thereto a synthetic interlining fabric.

Preferably, the bonding is carried out employing a stretchable bonding agent or film.

While not restricted thereto, the woven fabric employed in the method of the invention will usually be of a non-synthetic textile material, for example wool or cotton, which can not normally be permanently set by heat alone. By contrast, the interlining material will normally be a synthetic material which is thermoplastic and can be heat set, such as a polyester or polyamide textile material.

The bonding coating or film is preferably material which as well as bonding will impart stretch to the final combined product and it is preferred for this purpose to use a polyurethane material. The material may be coated on either the woven non-synthetic fabric or the interlining fabric or may be a film interposed between the two. This is employed where additional 'pull' is required to to give the necessary stretch and recovery

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to the final product. Where, for example, it is desired to attach a (non-stretch) interlining to a stretch fabric, then this may not be necessary, as discussed more fully hereinafter.

The method of the invention is preferably carried out by the machine as described in our above-mentioned European patent publication which comprises means for applying heat and pressure to a woven fabric, and transport means for effecting relative movement between the heat and pressure application means and the fabric whereby passage of the fabric through the apparatus results in the yarn strands substantially across the width of the fabric being forced closer together thus imparting semi-permanent stretch into the fabric. This process may be described as "compressive shrinking" for the purposes of simplicity in the present description. When applied to a non-synthetic woven fabric, compressive shrinking produces stretch but this is not permanent in the sense that it is gradually lost or, if a subsequent heat or steam treatment is applied, will be lost completely at once. Thus, in the process of our above-mentioned European patent publication, the second stage was used to fix, or render "permanent", the stretch characteristics.

In the process of the present invention the interlining material is both fixed to the woven non-synthetic fabric and at the same time is itself set so that the compressive shrinking applied to it is "permanent". Being bonded to the woven fabric it renders the stretch imparted to that fabric "permanent" also.

The interlining material used may be a fine woven polyamide or polyester fabric, preferably the latter, although other fabric structures could be used, such as needled or water entangled non-wovens. While the interlining supplied for use with our above-mentioned European patent publication needed to have a considerable degree of stretch and high elastic modulus, that used initially in the present invention may be of less stretchable and much cheaper material. The additional stretchability is supplied by the compressive shrinking and the extra elastic modulus may be supplied by the bonding material which is why polyurethane is preferred.

One passage through the machine may be sufficient to produce the finished product in that the bond produced by the bonding coating or film is sufficiently strong for the combination

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to withstand subsequent wear. Alternatively, if this is not the case, the combined fabric can be passed through a subsequent means such as that described in our above mentioned patent publication for affixing the fabric previously treated in the compressive shrinking area by a second application of heat and pressure to effect complete bonding.

As before, the fabric may be treated in full width form but typically it is treated in strips which are then formed into trouser or skirt waistbands. Clearly the cost of a machine to treat such strips of material is considerably less than that required to treat fabric in full width. It is therefore an advantage of the invention that, with the interlining necessary to stabilise the stretch in the woven fabric being effectively produced at the same time as it is affixed to the woven fabric, the interlining is produced in narrow width, and a full-width production machine for the interlining is rendered unnecessary.

There are, however, many applications where this process could be used in a wide width form, e.g. from 1.5 metres to 5 metres width, where there is a requirement to convert rigid fabrics into ones with linear stretch.

It has been found that, at the temperature normally used in the compressive shrinking process the interlining fabric, a thermoplastic synthetic material, typically a polyester fabric, is heat set so that the extra elasticity imparted to it by the compressive shrinking process is rendered "permanent".

Where stretch fabrics are utilised in the production of stretch trouser or skirt waistbands, the majority of manufacturers prefer to affix, e.g. fuse, a stretch interlining to the surface of the waistband. This stretch interlining is generally, although not always, of a non-woven material and is significantly more expensive than its 'rigid' equivalent. The interlining in this case is not required to impart elastic recovery properties to the waistband as the waistband fabric is already a stretch variety. The stretch interlining is used to make the waistband fabric more substantial and easier to handle in subsequent processing.

In accordance with a further embodiment of the invention a standard rigid fusible non-woven or other relatively rigid knitted material may be processed in narrow width form

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with the stretch waistband fabric through the above-mentioned compressive shrinking machine to convert the two into a laminate which has stretch characteristics in the length direction. As the waistband fabric is a stretch material, the interlining needs only to move with the fabric and is not required to provide additional stretch recovery, and thus a stretchable bonding agent is not required (although a bonding agent may be used).

In addition, the stretch fabric may be tensioned during processing with the 'rigid' interlining so that it is compressively 'shrunk' back to its original dimensions. That is, if the process achieves 20% shrinkage in the interlining, the waistband fabric would be pre-tensioned out by 25% of its length prior to compressive shrinking. After processing it would then shrink back to its original length.

While the fabric of the invention is primarily useful for waistbands for skirts, trousers and the like it is not so-limited. Other uses will become apparent to those skilled in the art. For example, as disclosed in our PCT application GB99/01146, parts of the woven fabric can be left unstabilised, or stabilised to a lesser degree, so that on subsequent relaxation the composite assumes a desired shape, for example a curved shape, which may be useful in many areas in garment construction.

The invention further extends to the combined fabric produced in accordance with the method of the invention.

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CLAIMS

1. A method of treating a woven fabric to produce a stretchable fabric combination which comprises applying heat and pressure to the fabric in such a manner that the yarn strands substantially across the width of the fabric are forced closer together thus imparting generally semi-permanent stretch into the fabric while simultaneously at least partially bonding thereto a synthetic interlining fabric..
2. A method as claimed in claim 1 wherein the woven fabric is a non-synthetic textile material, for example wool or cotton, which cannot normally be permanently set by heat alone.
3. A method as claimed in either of claims 1 or 2 in which the interlining material is a synthetic material which is thermoplastic and can be heat set, such as a polyester or polyamide textile material.
4. A method as claimed in any of claims 1 to 3 in which the bonding is carried out by coating or film which as well as bonding will impart stretch to the final combined product.
5. A method as claimed in claim 4 in which the bonding coating or film is a polyurethane material.
6. A method as claimed in any of claims 1 to 5 in which the bonding coating or film is coated on either the woven non-synthetic fabric or the interlining fabric or is a film interposed between the two.
7. A method as claimed in any of claims 1 to 6 wherein the interlining material used is a fine woven polyamide or polyester fabric.

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8. A method as claimed in claim 1 wherein a standard rigid fusible non-woven or other relatively rigid knitted material is processed in narrow width form with a stretch waistband fabric to produce a laminate which has stretch characteristics in the length direction.
9. A method as claimed in claim 9, wherein the stretch fabric is tensioned during processing with the interlining so that it is compressively 'shrunk' back to its original dimensions.
10. A fabric produced in accordance with the method of the preceding claims.

PATENT COOPERATION TREATY

From the
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

To:

WHARTON, Peter Robert
URQUHART-DYKES & LORD
Tower House
Merrion Way
Leeds LS2 8PA
GRANDE BRETAGNE

UDL LEEDS

PCT

NOTIFICATION OF TRANSMITTAL OF
THE INTERNATIONAL PRELIMINARY
EXAMINATION REPORT
(PCT Rule 71.1)

Date of mailing
(day/month/year) 20.09.2001

Applicant's or agent's file reference
P54509WO/PRW

IMPORTANT NOTIFICATION

International application No.
PCT/GB00/02993

International filing date (day/month/year)
07/08/2000

Priority date (day/month/year)
06/08/1999

Applicant

PRO-FIT INTERNATIONAL LIMITED et al.

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary examination report and its annexes, if any, established on the international application.
2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.
3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.

4. REMINDER

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices) (Article 39(1)) (see also the reminder sent by the International Bureau with Form PCT/IB/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.

Name and mailing address of the IPEA



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Form PCT/PEA/416 (July 1992)

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference P54509WO/PRW		FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/GB00/02993	International filing date (day/month/year) 07/08/2000	Priority date (day/month/year) 06/08/1999	
International Patent Classification (IPC) or national classification and IPC D06C21/00			
Applicant PRO-FIT INTERNATIONAL LIMITED et al.			
<p>1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 6 sheets, including this cover sheet.</p> <p><input type="checkbox"/> This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of a total of sheets.</p>			
<p>3. This report contains indications relating to the following items:</p> <ul style="list-style-type: none"> I <input checked="" type="checkbox"/> Basis of the report II <input type="checkbox"/> Priority III <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability IV <input type="checkbox"/> Lack of unity of invention V <input checked="" type="checkbox"/> Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability: citations and explanations supporting such statement VI <input type="checkbox"/> Certain documents cited VII <input checked="" type="checkbox"/> Certain defects in the international application VIII <input checked="" type="checkbox"/> Certain observations on the international application 			
Date of submission of the demand 23/01/2001		Date of completion of this report 20.09.2001	
Name and mailing address of the International preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523556 epmu d Fax: +49 89 2399 - 4465		Authorized officer Bichi, M Telephone No. +49 89 2399 2055 	

Form PCT/IPEA/409 (cover sheet) (January 1994)

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. PCT/GB00/02993

I. Basis of the report

1. With regard to the elements of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

1-5 as originally filed

Claims, No.:

1-10 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description. pages:
- ☐ the claims. Nos.:
- ☐ the drawings. sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**International application No. PCT/GB00/02993

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes:	Claims	
	No:	Claims	1 No
Inventive step (IS)	Yes:	Claims	
	No:	Claims	1-10 No
Industrial applicability (IA)	Yes:	Claims	1-10 Yes
	No:	Claims	

2. Citations and explanations
see separate sheet

VII. Certain defects in the international application

The following defects in the form or contents of the international application have been noted:
see separate sheet

VIII. Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:
see separate sheet

INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET

International application No. PCT/GB00/02993

Point V

- 1). The following documents (D) are referred to in this communication; the numbering will be adhered to in the rest of the procedure.

D1 = GB-A-2256785

D2 = EP-B-705356

- 2). A method of treating a woven fabric to produce a stretchable fabric combination by applying heat and pressure to the fabric in such a manner that the yarn strands across the width of the fabric are closer together, thus imparting stretch into the fabric while simultaneously bonding thereto a synthetic interlining fabric is already known; see D1 (in particular page 2, lines 12-20, page 10, line 3 to page 11, line 28). Herein the "pretreated tape" 6 has the bonding coating which, by heat and pressure, bonds the garment panel, i.e. is the case disclosed in claim 6 of the present application, as well as on page 2, last paragraph, wherein the bonding coating is coated on the interlining fabric.

According to the above mentioned considerations the method disclosed in claim 1 would not appear to be new. Claim 1 therefore would not appear to meet the requirements of Article 33(2) PCT.

- 3). Moreover the subject-matter of claim 1 would also not appear to be inventive. It is pointed out that the object of the present application (see page 1, first two paragraphs) is the same as the one of D1 (see page 3, first paragraph) as also of D2, which discloses a treating method for obtaining a stretchable fabric which indeed is very similar to the one of the present application, **however carried out in two stages**, i.e. the step of stretching is carried out on the fabric before and not simultaneously with the step of bonding the synthetic interlining fabric.

However all the steps as in claim 1 are known from D2, except for the **simultaneous** treatment of bonding and stretching.

However such a simultaneous treatment would appear to lie well within the choice of the skilled engineer. Such a simultaneous treatment is known for example from D1 (see above). The skilled engineer working in the field would therefore regard it as a normal option to include such a step in the method described in document D2 in order to solve the problem posed. The positive effect of such a known step (for

INTERNATIONAL PRELIMINARY

EXAMINATION REPORT - SEPARATE SHEET

International application No. PCT/GB00/02993

example time savings and so on) are throughout foreseeable and therefore no inventive step can be recognized in such an easy combination. The subject-matter of claim 1 therefore does not appear to involve an inventive step (Article 33(3) PCT). See also point 6 hereinafter.

- 4). The dependent claims do not appear to contain any additional features which, in combination with the features of any claim to which they refer, involve an inventive step (Art. 33(3) PCT). The steps herein disclosed would appear to be merely some of several possibilities from which the skilled man would select, in accordance with circumstances, without the exercise of inventive skill. Hints thereto could furthermore easily be taken from the above mentioned documents D1, D2, strictly related to the field.
- 5). Having regard to the subject-matter of claim 10 it is pointed out that with a product-by-process claim it is necessary to identify structural features or parameters of the product by which one can always and unequivocally distinguish the products of the application from prior art products. The fabrics as treated with the process according to the present application will not be distinguishable from the ones, for example of D1 or D2, since they are not clearly defined. Moreover since they are produced by essentially the same process, which is not new (see D1), or not inventive (see D1 and D2), also the products obtained cannot be considered as implying novelty or inventive step. Thus claim 10 does not satisfy the criterion set forth in Article 33(2), (3) PCT.

Point VII

- 6). Objection of insufficient disclosure (Art.5 PCT) is raised, since it would appear that the man skilled in the art is not capable of treating/manufacturing such a fabric with the scarce indications submitted in the application. In particular claim 1 covers a very broad range of products and **not a single detailed fabricating treatment method of such a fabric has been submitted** as well as no drawings of the machine which carries out the process. Temperatures values or pressure values have not been submitted as well.

Reference to the EP-B-0705356 is not enough.

Also the further embodiment disclosed in claim 8 is fully obscure (Art.5 PCT), since

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the man skilled in the art could not be capable of treating/manufacturing such a fabric **having stretch characteristics in the length direction (how?)** with the scarce indications submitted in the application (see page 5, lines 5). In particular it is fully obscure which should be the clear differing method steps (apart from the fabric) between the treating method as disclosed in claim 1 and claim 8 of the present application.

- 7). It is thus unclear which should be the gist of the invention and which features of the application could form the basis for a new independent claim 1 satisfying the requirements of Articles 33(2) and (3) PCT.
- 8). Independent claim 1 is not correctly drafted in the two-part form in accordance with Rule 6.3(b) PCT, which in the present case would be appropriate, with those features known in combination from the prior art (D1 or D2) being placed in a preamble (Rule 6.3(b)(i) PCT) and with the remaining features being included in a characterising part (Rule 6.3(b)(ii) PCT).
- 9). Contrary to the requirements of Rule 5.1(a)(ii) PCT, the relevant background art disclosed in the document D1 is not mentioned and discussed in the description.

Point VIII

- 10). Claim 9 cannot be dependent upon claim 9, thus not satisfying the requirements of Art. 6 PCT.